CLAIMS

What is claimed is:

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- A diagnostic method for performing diagnostics in a system adapted to
 receive modular components comprising:
 - a) graphically displaying a hierarchical representation of system components and modular add-on components;
 - b) detecting the modular components coupled to the system;
 - c) dynamically requesting and receiving the electrical control topology and fault status of each coupled modular component; and
 - d) dynamically integrating the electrical control topology and fault status of each coupled modular component into the display of a).
 - 2. A diagnostic method for diagnosing post-manufacture modular add-on components coupled to a system, said method comprising:
 - a) dynamically retrieving control system topology information not stored at the time of manufacture pertaining to a module chosen for a system graphical display;
 - b) via each module, generating diagnostic information about the components of a module;
- c) dynamically retrieving module diagnostic information pertaining to a module chosen for a system graphical display;

- d) hierarchically displaying the component levels of the module chosen for graphical display;
 - e) providing a link between the component levels; and
 - f) indicating the diagnostic status of a displayed component level.
- 3. The method of Claim 1, wherein a fault condition in a component of a module is indicated in the highest hierarchical level pertaining to the module.
 - 4. The method of Claim 1, wherein for all levels lower than the highest level, all components of a level are controlled by the immediate highest level.
- 5. The method of Claim 1, wherein a lower level is displayed by activating a pointer on the immediately higher level.
 - 6. The method of Claim 1, further comprising:

maintaining a count of each time the fault status of a component in a module changes; and

displaying said count.

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- 7. The method of Claim 1, further comprising: automatically performing c) and d) at predefined intervals.
 - 8. The method of Claim 1, wherein a fault condition in a component of a module is indicated by color-coded indicia in the highest hierarchical level pertaining to the module.
- 20 9. The method of Claim 1, wherein said system is an image reproduction system.

- 10. The method of Claim 1, wherein said system comprises the print engine of an image reproduction machine.
- 11. The method of Claim 2, wherein a fault condition in a component of a module is indicated in the highest hierarchical level pertaining to the module.
- 12. The method of Claim 2, wherein for all levels lower than the highest level, all components of a level are controlled by the immediate highest level.
- 13. The method of Claim 2, wherein a lower level is displayed by activating a pointer on the immediately higher level.
 - 14. The method of Claim 2, further comprising:

maintaining a count of each time the fault status of a component in a module changes; and

displaying said count.

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- 15. The method of Claim 2, further comprising: automatically performing a) and f) at predefined intervals.
- 16. The method of Claim 2, wherein a fault condition in a component of a module is indicated by color-coded indicia in the highest hierarchical level pertaining to the module.
- 17. The method of Claim 2, wherein said system is an image reproduction system.
- 20 18. The method of Claim 2, wherein said system comprises the print engine of an image reproduction machine.